P5 series Positional *Servodrive* assembly.

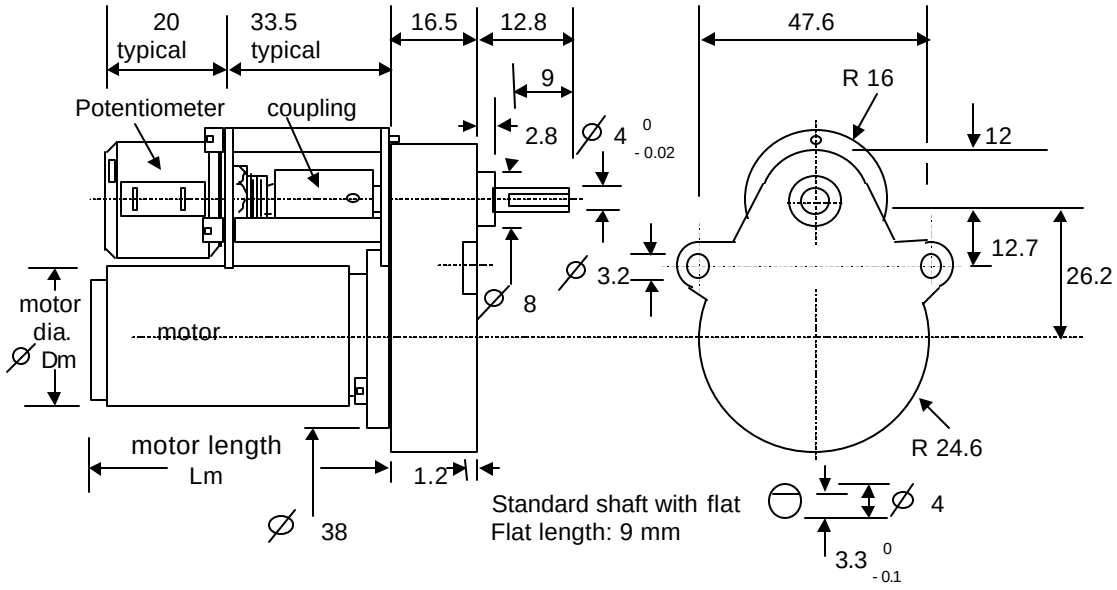
The P5 positional servodrive incorporates a potentiometer which is connected to the output shaft to provide an analogue reference signal proportional to output shaft position.

A variety of potentiometer options are available to provide the choice of single or multi-turn operation. Although conforming to the standard panel mount design, the feedback potentiometers utilised in P5 positional *servodrives* have a reinforced internal construction to provide long life in motor driven applications.

The feedback potentiometer is coupled directly to the *servodrive's* output shaft via a backlash-free coupling which incorporates a friction clutch to protect the potentiometer against an overtravel condition when an option fitted with end stops is specified.

P5 series *Servodrives* may be specified with any of the gear ratios shown on earlier pages to provide a wide choice of speed options.

Dimensions: mm



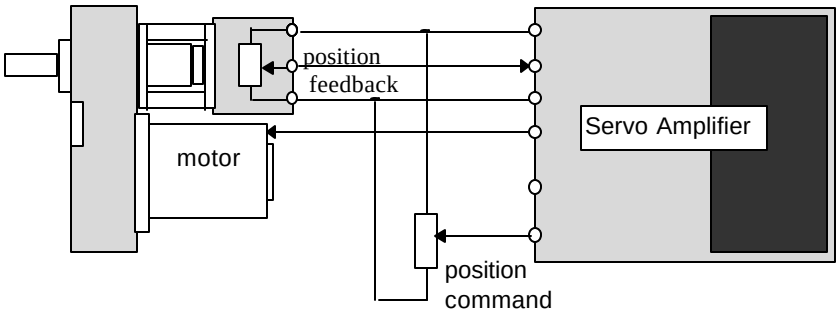
Available motor options:

Geared ac motors	Motor diameter (Dm)	Overall motor length (Lm)
P532-SS/SP-G01 to G62-L....	35 mm	23.7 mm
Geared stepper motors		
P532-ST-G01 to G62 - L...	35 mm	23.7 mm
P582201-G01 to G62 - L...	36 mm	23.1 mm
Geared dc servo motors		
P522-DC-G03 to G62 - L...	22 mm	34.5 mm
P528-DC-G01 to G62 - L...	28 mm	44.5 mm excluding rear shaft
P518-DC-G01 to G62 - L	29 mm	48 mm including terminals
Geared dc motor-tacho units		
P523-DT-G01 to G62 - L...	23 mm	56.85 mm
P528-DT-G01 to G62 - L...	28 mm	67.0 mm

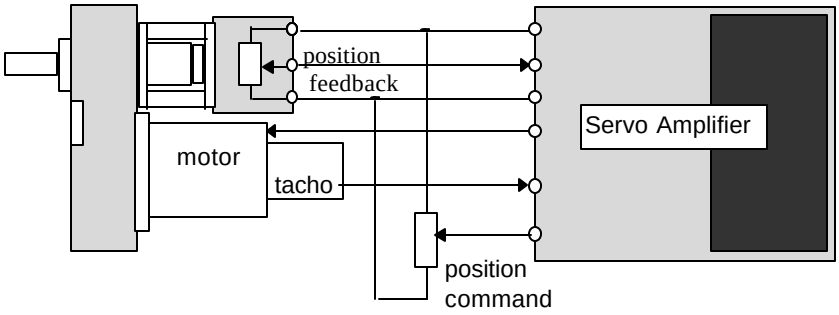
Potentiometer options: L100 single turn continuous rotation : **> 340 degrees electrical rotation.**
L101 single turn with end stops : **> 300 degrees electrical rotation**
L102 three turn with end stops : **>1080 degrees electrical rotation**
L103 ten turn with end stops : **>3600 degrees electrical rotation**

Typical connections for P5 series dc *servodrives*

a) Control of output shaft position using potentiometer feedback



b) Positioning system utilising tacho feedback to provide velocity damping signal for improved stability



Typical dc servo motor & amplifier combinations:

Geared dc servo motors	Suitable Amplifier	Power supply for AC operation	Alternative dc supply required
P522-DC012 Series	EM 40	EM 47	± 20 Vdc
P518-DC105 Series	EM 40	EM 47	± 20 Vdc
P516-DC111 Series	EM40-1	EM47	± 20 Vdc
P516-DC... Series **	MSE421-30	EM171	12-28 Vdc
P528-DC... Series	MSE421-30	EM171	12-28 Vdc
Geared dc motor-tacho P523-DT012 Series	EM40-1	EM47	± 20 Vdc
P528-DT... Series	MSE421-30	EM171	12-28 Vdc

Note **: P516 series is not available as *Servodrive* option with integral potentiometer.

As will be seen from above, the EM40 dc servo amplifier is usually used in conjunction with the EM47 power supply for mains powered applications.
Up to three EM40 driven axes may be powered from a single EM47, while it is usually possible to power two EM40-1 driven axes from a single EM47. In all cases where EM40 is recommended, it may be substituted by MSE421 *Euroamp* where operation from a dc source such as a battery is required.